Preliminary Amendment dated 7/16/2001

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PATENT

Box REISSUE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	Reissue Application No. 09/706,194	:	
		:	Group Art Unit: 2166
Filed:	November 3, 2000	:	
		:	
Patent No.:	5,832,453	:	Examiner: Samuel Rimell
Granted:	November 3, 1998	:	
Patentee:	Danamichele Brennen O'Brien	:	
		:	
Title:	COMPUTER SYSTEM AND METHOD FOR DETERMINING A TRAVEL SCHEME MINIMIZING TRAVEL COSTS FOR AN ORGANIZATION	:	Attorney Docket No. **7165-27RE**

PRELIMINARY AMENDMENT

Prior to examining the above-identified application, please amend the application, without prejudice. A marked-up version of claims 124, 141, 160 and 163-166 is attached hereto.

In the claims:

Please amend claims 124, 141, 160 and 163-166 as follows:

124. **(Amended)** A method for determining an optimum travel scheme for minimizing travel costs for traveling a plurality of travel links being served by a plurality of travel carriers by selectively allocating travel trips on each link to the carriers serving the link, comprising the steps of:

(a) determining travel information representative of the links and the carriers serving the links;

(b) determining constraints on allocating the trips to the carriers;

(c) prospectively allocating the trips among the carriers in accordance with the travel

information and the constraints to provide a travel scheme;

(d) determining a cost of the travel scheme of step (c);

(e) ascertaining whether any of the travel information or constraints [have] should be changed;

(f) if any of the travel information or constraints have changed, then repeating steps (c), (d), and (e) until the optimum travel scheme minimizing the travel costs in accordance with the travel information and the constraints is determined; and

(g) generating a report representative of the optimum travel scheme.

141. **(Amended)** A method for determining an optimum travel scheme for traveling a plurality of travel links being served by a plurality of travel carriers, comprising the steps of:

(a) determining travel information representative of the travel links and the travel carriers serving the travel links;

(b) determining constraints on allocating travel trips to the travel carriers; and

(c) [prospectively]allocating the travel trips among the travel carriers in accordance with the travel information and the constraints to provide the optimum travel scheme.

[(d) generating a travel scheme.]

160. **(Amended)** An article of manufacture for determining an optimum travel scheme for minimizing travel costs for traveling a plurality of travel links being served by a plurality of travel carriers by selectively allocating travel trips on each link to the carriers serving the link, the article of manufacture comprising a computer-readable medium holding computer-executable instructions for performing a method comprising the steps of:

(a) determining travel information representative of the links and the carriers serving the links;

(b) determining constraints on allocating the trips to the carriers;

(c) prospectively allocating the trips among the carriers in accordance with the travel information and the constraints to provide a travel scheme;

(d) determining a cost of the travel scheme of step (c);

(e) ascertaining whether any of the travel information or constraints [have] should be changed;

(f) if any of the travel information or constraints have changed, then repeating steps (c), (d), and (e) until the optimum travel scheme minimizing the travel costs in accordance with the travel information and the constraints is determined; and

(g) applying the optimum travel scheme to minimize travel costs by purchasing travel trips in accordance with such optimum travel scheme.

163. **(Amended)** The method of claim 141 further comprising:

(d) determining a cost of the travel scheme [of step (d)].

164. **(Amended)** The method of claim 163 further comprising:

(e) ascertaining whether any of the travel information or constraints [have] should be changed; and

(f) if the travel information or constraints have changed, repeating steps (c) and (d),[, (d), and (e)] until an optimum travel scheme minimizing the travel costs in accordance with the travel information and the constraints is determined.

165. **(Amended)** The method of claim 164 further comprising:

[(h)](g)generating output data representative of the travel scheme.

166. **(Amended)** An apparatus for determining an optimum travel scheme for traveling a plurality of travel links being served by a plurality of travel carriers, comprising the steps of:

(a) means for determining travel information representative of the travel links and the travel carriers serving the travel links;

(b) means for determining constraints on allocating travel trips to the travel carriers; and

(c) means for prospectively allocating the travel trips among the travel carriers in accordance with the travel information and the constraints to provide the optimum travel scheme.

Please add new claim 168-172 as follows:

168. **(New)** A method for determining an optimum travel scheme for an organization having a plurality of travelers traveling a plurality of travel links being served by a plurality of travel carriers, comprising the steps of:

(a) determining travel information relating to the travel links and the travel carriers serving the travel links including travel cost information for each carrier serving the links, supply and demand information for each link, and travel information regarding the organization;

(b) determining constraints on allocating travel trips to the travel carriers;

(c) allocating the travel trips among the travel carriers in accordance with the travel information and the constraints;

(d) generating a travel scheme.

169. **(New)** A method for determining a cost-effective travel scheme for an organization, where the organization expects to purchase travel trips for a plurality of travelers for a plurality of predetermined travel links, each travel link comprising a travel origin and a travel destination, each travel link being served by at least one of a plurality of travel carriers, the method comprising the steps of:

obtaining travel information relating to the carriers and the links;

constructing a mathematical expression from the travel information, the mathematical expression representing a travel cost to the organization to purchase travel trips for the plurality of travelers for the plurality of predetermined links;

constructing a set of constraints from the travel information, the constraints comprising restrictions relating to the mathematical expression; and

applying a mathematical programming solution technique to the mathematical expression and the set of constraints to find a solution of the mathematical expression corresponding to a lowest travel cost relative to a set of possible solutions of the mathematical expression.

170. **(New)** A method for determining a cost-effective travel scheme for traveling a plurality of travel links being served by a plurality of travel carriers, the method comprising the steps of:

obtaining travel information relating to the plurality of travel links and the plurality of travel carriers;

constructing a travel scheme model from the travel information, the travel scheme model comprising a mathematical programming model;

applying a mathematical programming solution technique to the travel scheme model to find a solution of the travel scheme model corresponding to a lowest travel cost relative to a set of possible solutions of the travel scheme model.

171. **(New)** The method of claim 170, wherein the mathematical programming model is a goal programming model.

172. **(New)** The method of claim 170, wherein the mathematical programming model is a goal programming model and the mathematical programming solution technique is a linear programming solution technique.

REMARKS

Claims 1 to 166 were pending in the application. Claims 124, 141, 160 and 163-166 have been amended to correct typographical errors and to more correctly claim the invention. New claims 168-172 have been added. No new matter has been added by this Amendment.

Below, Applicants have provided specific references to information contained in the specification, claims, and figures of application to support and disclose each and every element of the claims above.

For claim 168, Applicants point examiner to column 1 line 50 through column 2 line 4 of the specification, among others, and Figs. 1, 3, 4, and 6 which support and disclose each and every element of claim 168.

For claims 169 and 170, Applicants point examiner to column 1 line 50 through column 2 line 4 and column 10 lines 56 through 64 of the specification, among others, and Figs. 1, 3, 4, and 6 which support and disclose each and every element of claims 169 and 170.

For claim 171, Applicants point examiner to column 9 lines 14 through 27 of the specification, among others, which support and disclose each and every element of claim 171.

For claims 172, Applicants point examiner to column 9 lines 14 through 27 and column 10 lines 56 through 64 of the specification, among others, which support and disclose each and every element of claims 172.

Early examination and notice of allowance are respectfully solicited.

Respectfully submitted,

Dated: March 25, 2009

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